

Slides for Use in Thesis Defense of Benjamin S. Waxman



ANTICIPATED DATE: MARCH 18TH, 2014

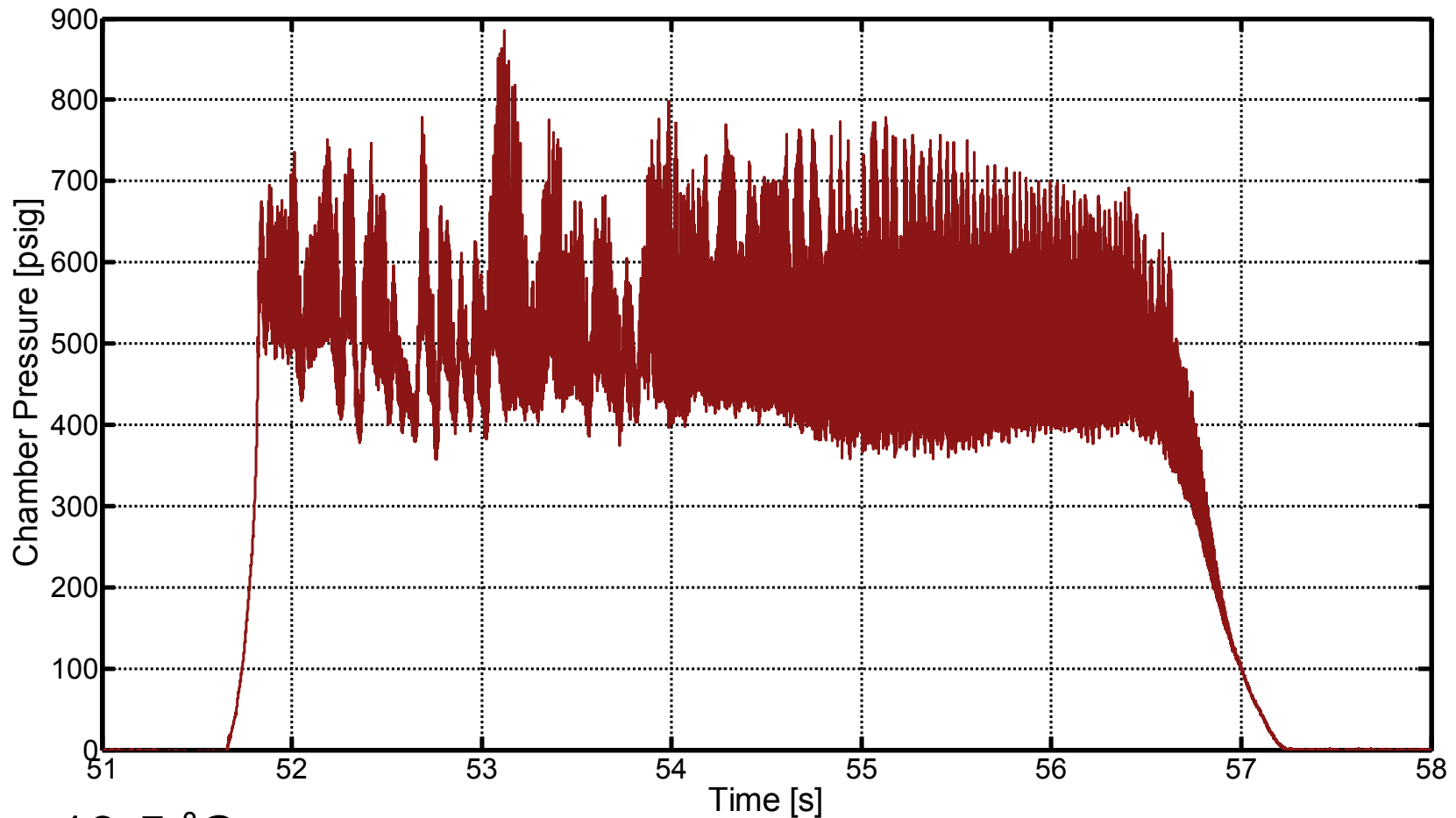
STANFORD UNIVERSITY
STANFORD, CA
94305

Benjamin S. Waxman
Stanford University, Stanford, CA 94305
waxman@stanford.edu

Gregory G. Zilliac
NASA Ames Research Center, Moffett Field, CA 94035
gregory.g.zilliac@nasa.gov

Peregrine Chamber Pressure Time-History: Test E2

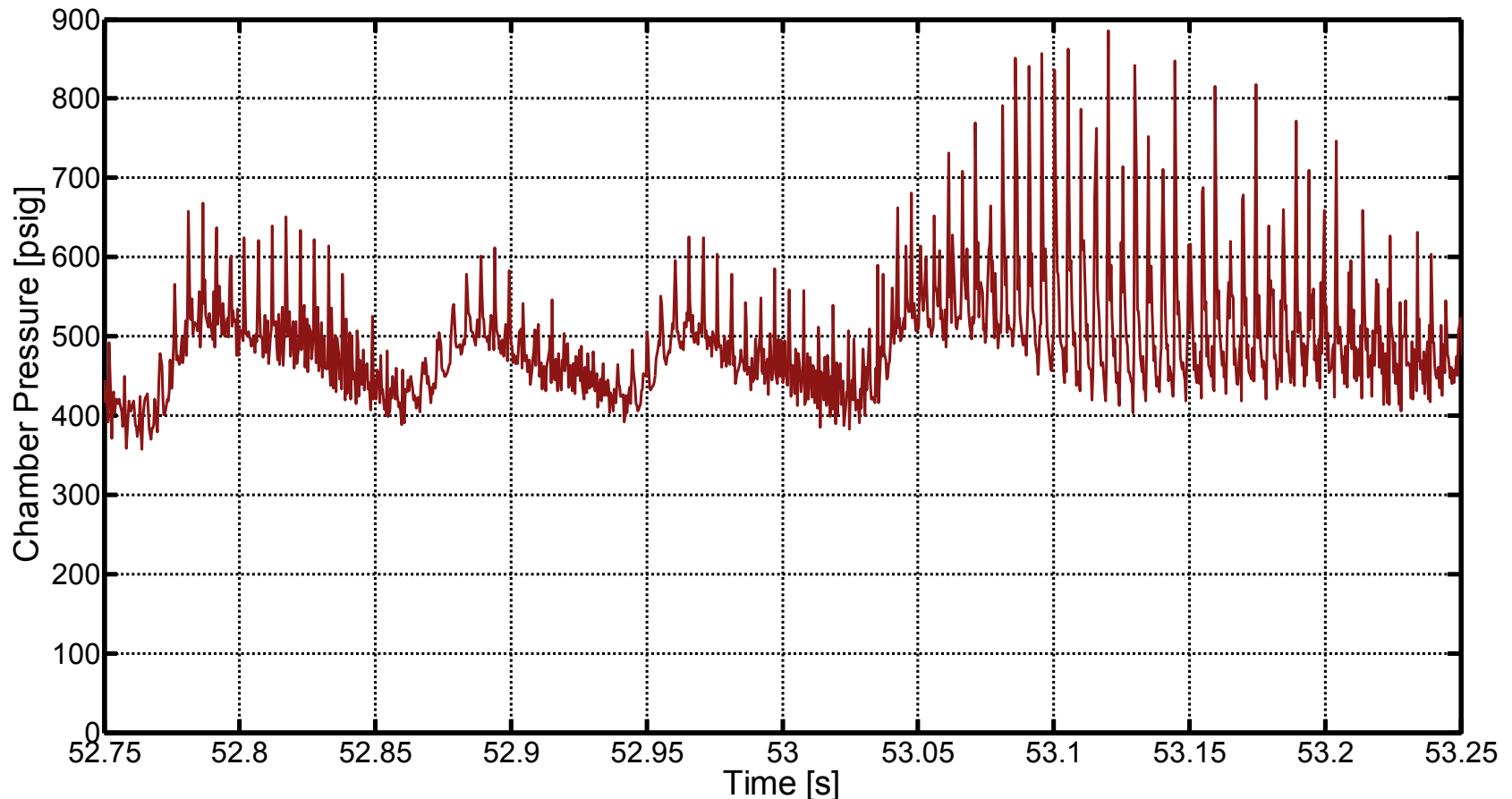
- RESULTS FROM EARLY TESTING IN THE PEREGRINE HYBRID COMBUSTION FACILITY



$T_{OX} \approx 13.5^{\circ}\text{C}$

Peregrine Chamber Pressure Time-History: Test E2 (Zoomed In)

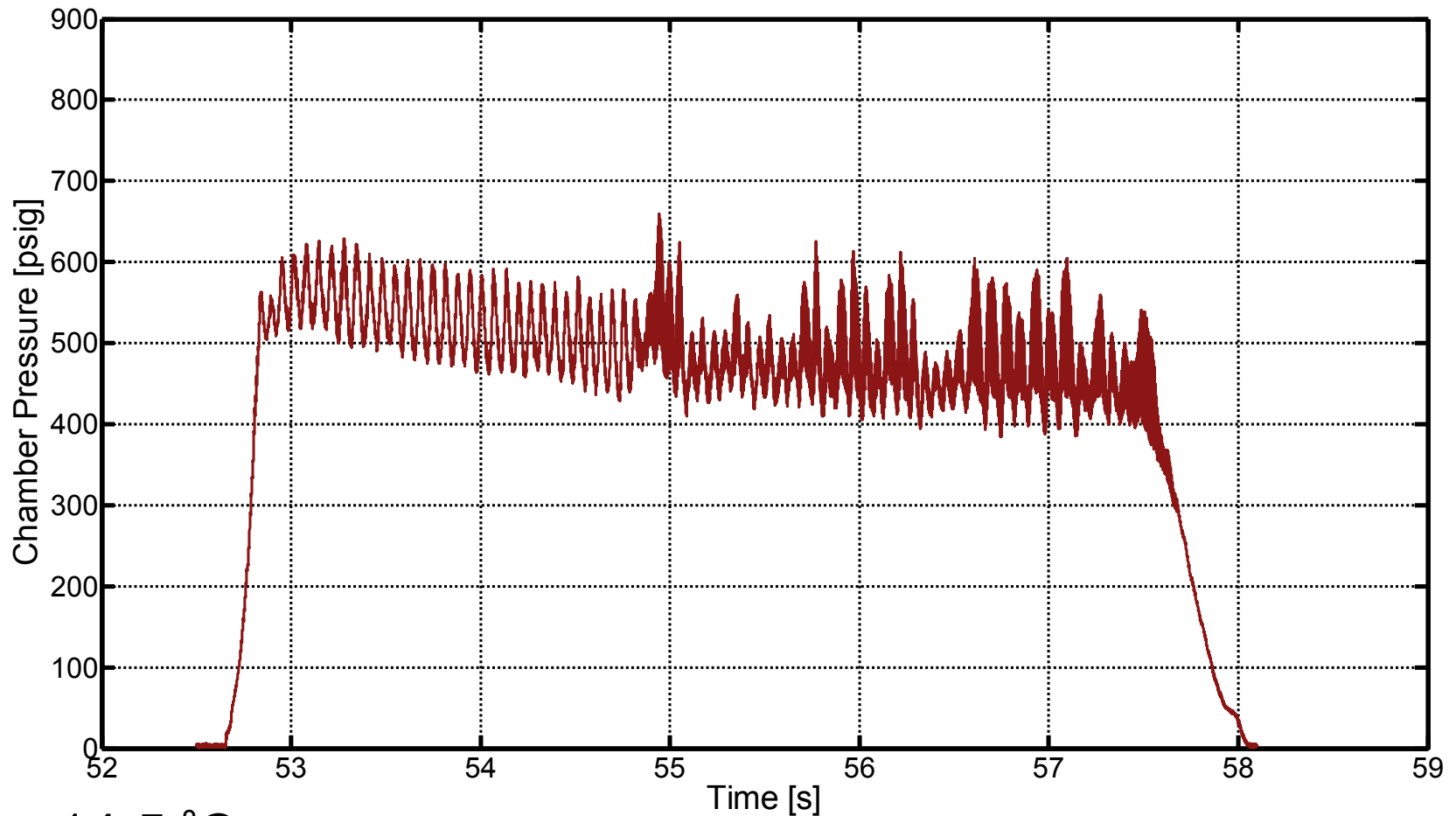
- RESULTS FROM EARLY TESTING IN THE PEREGRINE HYBRID COMBUSTION FACILITY



$T_{OX} \approx 13.5^\circ\text{C}$

Peregrine Chamber Pressure Time-History: Test E3-2

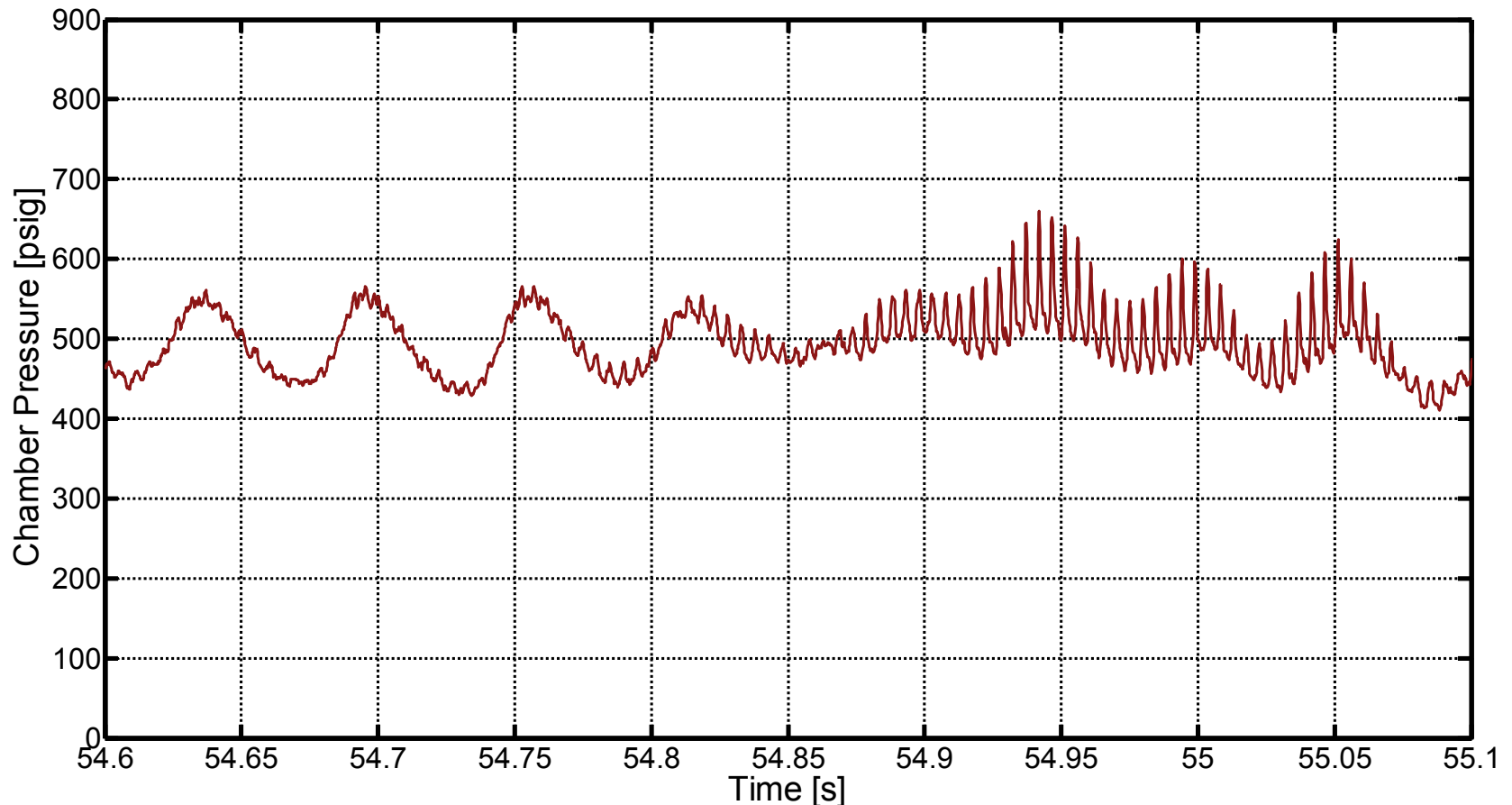
- PEREGRINE HYBRID COMBUSTION FACILITY TEST WITH BASELINE CHAMBER GEOMETRY



$T_{OX} \approx 14.5^{\circ}\text{C}$

Peregrine Chamber Pressure Time-History: Test E3-2 (Zoomed In)

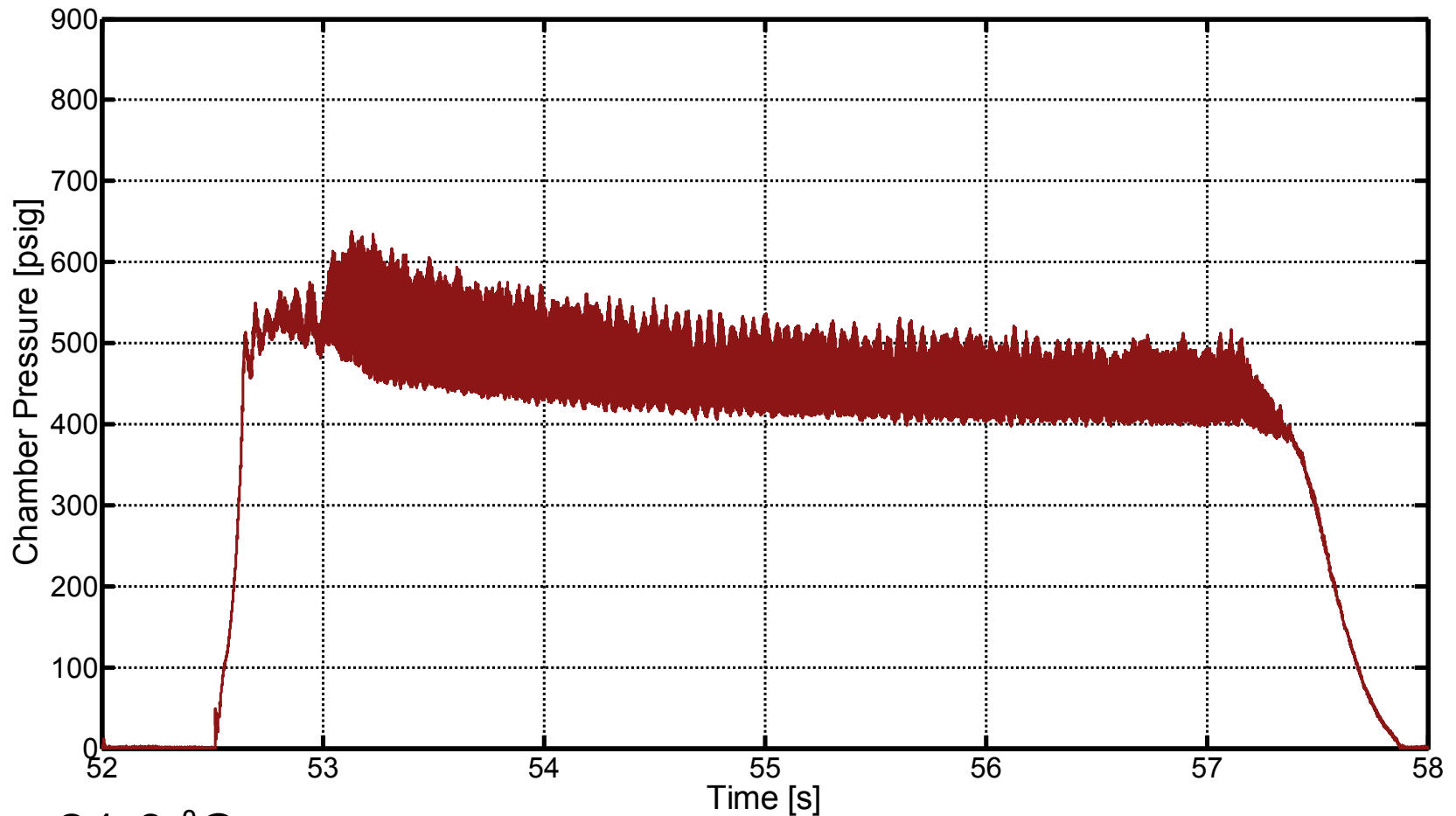
- PEREGRINE HYBRID COMBUSTION FACILITY TEST WITH BASELINE CHAMBER GEOMETRY



$$T_{\text{OX}} \approx 14.5^{\circ}\text{C}$$

Peregrine Chamber Pressure Time-History: Test E3-4

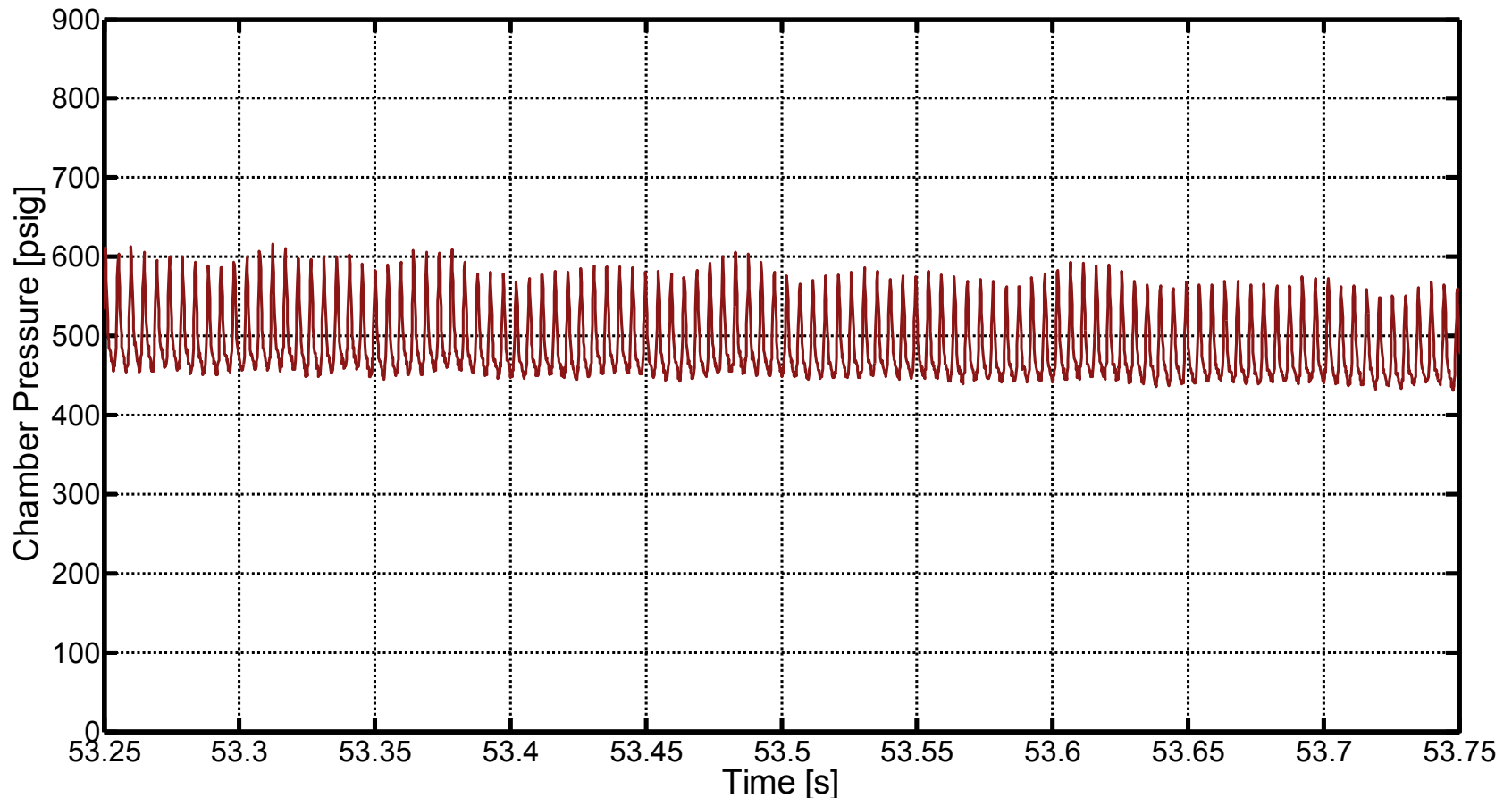
- PEREGRINE HYBRID COMBUSTION FACILITY TEST WITH BASELINE CHAMBER GEOMETRY AND **INCREASED OXIDIZER TEMPERATURE**



$T_{OX} \approx 21.0^{\circ}\text{C}$

Peregrine Chamber Pressure Time-History: Test E3-4 (Zoomed In)

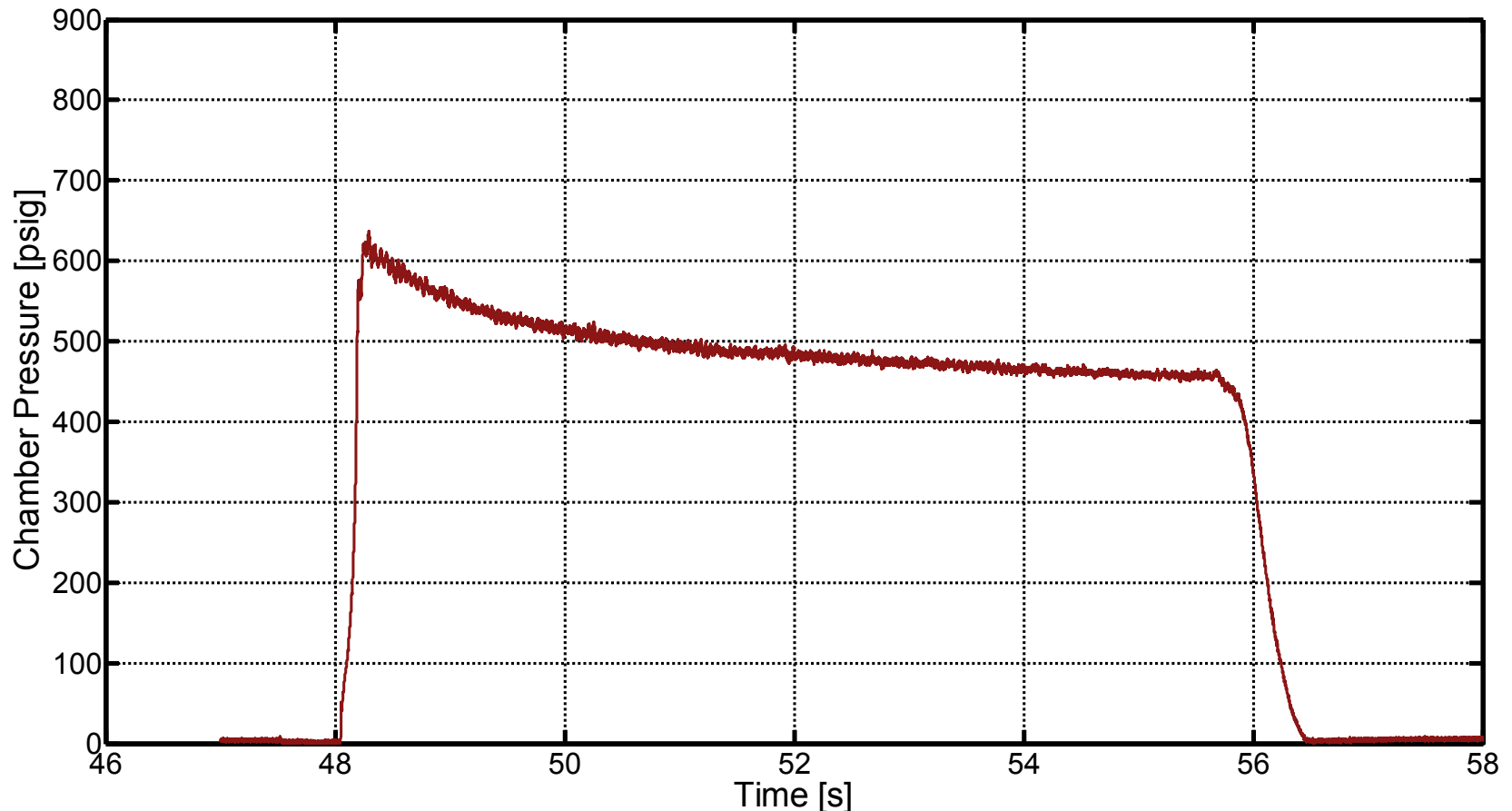
- PEREGRINE HYBRID COMBUSTION FACILITY TEST WITH BASELINE CHAMBER GEOMETRY AND **INCREASED OXIDIZER TEMPERATURE**



$$T_{\text{OX}} \approx 21.0^\circ\text{C}$$

Peregrine Chamber Pressure Time-History: Test E4-1

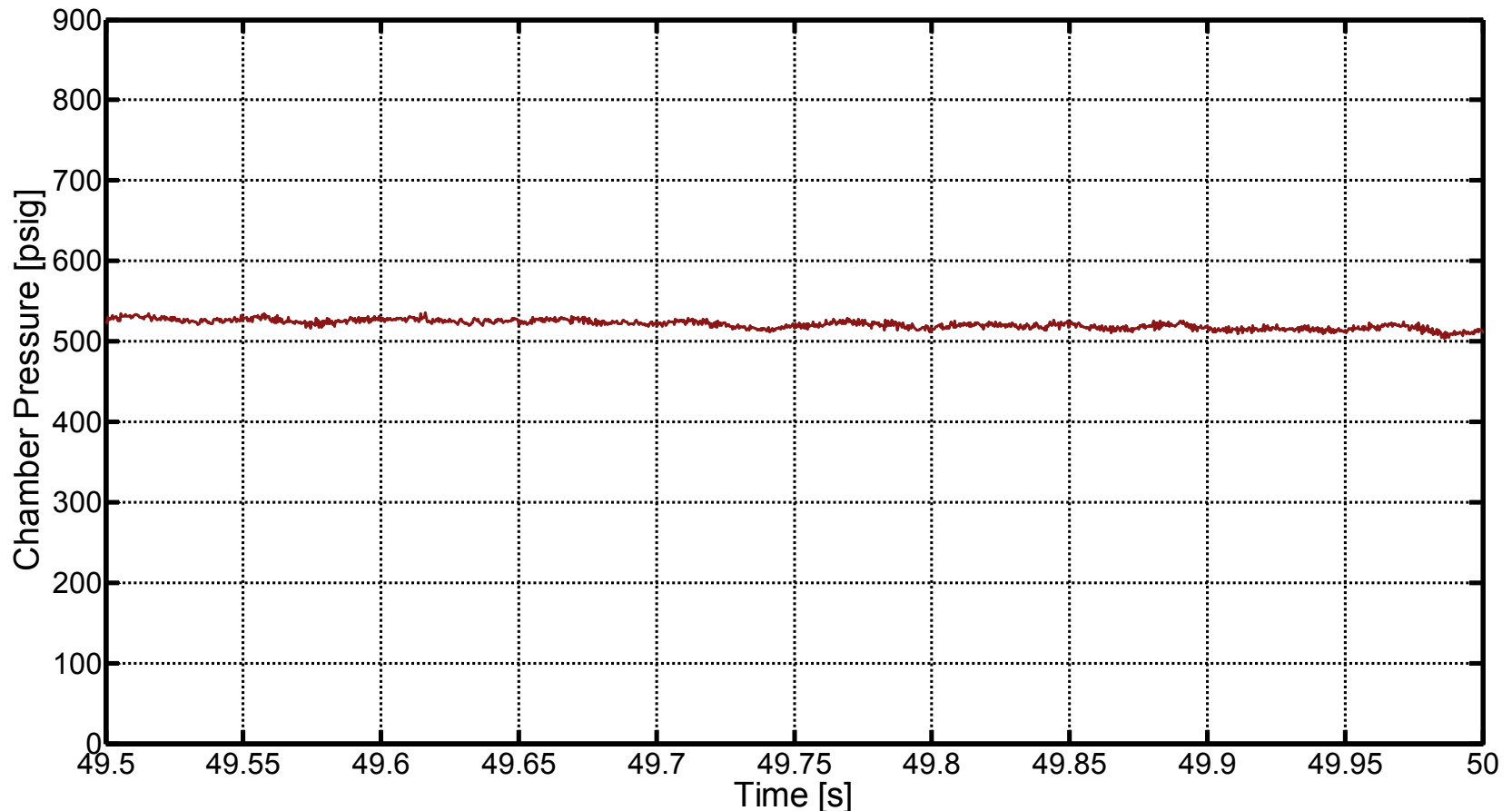
- PEREGRINE HYBRID COMBUSTION FACILITY TEST WITH **MODIFIED CHAMBER GEOMETRY** AND **INCREASED OXIDIZER TEMPERATURE**



$$T_{OX} \approx 22.5^{\circ}\text{C}$$

Peregrine Chamber Pressure Time-History: Test E4-1 (Zoomed In)

- PEREGRINE HYBRID COMBUSTION FACILITY TEST WITH **MODIFIED CHAMBER GEOMETRY** AND **INCREASED OXIDIZER TEMPERATURE**



$$T_{\text{OX}} \approx 22.5^{\circ}\text{C}$$